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## PATENT ABSTRACTS OF JAPAN

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(22) Application date: **16.07.97**

<p>(30) Priority:</p> <p>(43) Date of application publication: <b>09.02.99</b></p> <p>(84) Designated contracting states:</p>	<p>(71) Applicant: <b>ONO PHARMACEUT CO LTD</b></p> <p>(72) Inventor: <b>KIDO HIROSHI INOUE MASAHIRO</b></p> <p>(74) Representative:</p>
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## (54) NEW ACIDOCYTE SERINE PROTEASE

(57) Abstract:

### PROBLEM TO BE SOLVED:

To obtain the subject new enzyme useful for screening a serine protease inhibitor, diagnosing allergic diseases, infectious diseases, neoplastic diseases, collagen diseases, etc., comprising an acidocyte serine protease shown by a specific amino acid sequence.

**SOLUTION:** This new polypeptide is an acidocyte serine protease composed of an amino acid sequence shown by the formula in a substantially pure form, its homolog, its fragment or the homolog of the fragment and is useful for a method for screening a serine protease inhibitor and for diagnosing diseases such as allergic diseases, infectious diseases, neoplastic diseases, granulomatous diseases, collagen diseases, angiitis, etc. This serine protease is obtained by extracting the whole RNA from the blood of a patient of eosinophilic leucocytosis, cloning the RNA by RT-PCR to give a cDNA encoding a serine protease, linking the serine protease to a vector, inserting the vector into *Escherichia coli* and culturing the prepared transformant.

Net	Gly	Ala	Arg	Gly	Ala	Leu	Leu	Leu	Ala	Leu	Leu	Leu	Ala	Arg	Ala
-26	-25					-20						-15			
Gly	Leu	Arg	Lys	Pro	Glu	Ser	Gln	Glu	Ala	Ala	Pro	Leu	Ser	Gly	Pro
-10					-5						1			5	
Cys	Gly	Arg	Arg	Val	Ile	Thr	Ser	Arg	Ile	Val	Gly	Gly	Glu	Asp	Ala
				10					15					20	
Asn	Ile	Ser	His	His	Phe	Glu	Trp	Ile	Gln	Lys	Leu	Met	Ala	Gln	Ser
				250				255					260		
Gly	Met	Ser	Gln	Pro	Asp	Pro	Ser	Trp	Pro	Leu	Leu	Phe	Phe	Pro	Leu
				265				270					275		
Leu	Trp	Ala	Leu	Pro	Leu	Leu	Gly	Pro	Val						
				280				285							

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Identifier: AAN00001 DNA Sequence 1082 BP  
Release Info: Derwent Geneseq Database Release No. 200124; Date released 26-NOV-01  
Database XReference: WPI; 1999-183825/16.  
Accession Number: AAX15337  
Patent Title: New eosinophils serine protease - useful for prevention and treatment of allergic, infectious, tumour, granuloma  
Patented by: (ONOH ) ONO PHARM CO LTD.  
Inventor:  
Description: Nucleic acid encoding a human eosinophil serine protease.  
Patent Number: JP11032768-A  
Patent Publication Date: 09-FEB-1999  
Modification Date: 04-MAY-1999 (first entry)  
Local Filing: 16-JUL-1997; 97JP-0191319  
Priority: 16-JUL-1997  
Abstract: The present sequence encodes a human eosinophil serine protease. The protease is useful in drug compositions: tumour diseases, granulomatous diseases, collagen diseases and vascular inflammation.  
KeyWords: Human;eosinophil;serine protease;allergic disease;infectious disease;tumour;granulomatous disease;collagen c  
Organism Homo sapiens.  
Sequence Composition: Sequence 1082 BP; 216 A; 318 C; 308 G; 240 T; 0 other;  
Sequence: >AAX15337 JP11032768-A PA (ONOH ) PR 16-JUL-1997 PF 16-JUL-1997 Nucleic acid encoding a human  
GAGGAGGCCATGGGCGCGCGCGGGGCGCTGCTGCTGGCGCTGCTGCTGGCTCGGGCTGGA  
CTCAGGAAGCCGGAGTCGCAGGAGGCGGCGCCGTTATCAGGACCATGCGGCCGACGGGTC  
ATCACGTGCGGCATCGTGGGTGGAGAGGACGCCGAACCTCGGGCGTTGGCCGTGGCAGGGG  
AGCCTGCGCCTGTGGGATTCCACGTATGCGGAGTGAGCCTGCTCAGCCACCGCTGGGCA  
CTCAGGCGGCGCACTGCTTTGAAACCTATAGTGACCTTAGTGATCCCTCCGGGTGGATG  
GTCCAGTTTGGCCAGCTGACTTCCATGCCATCCTTCTGGAGCCTGCAGGCCTACTACACC  
CGTACTTCGTATCGAATATCTATCTGAGCCCTCGCTACCTGGGGAATTCACCCTATGAC  
ATTGCCTTGGTGAAGCTGTCTGCACCTGTACCTACACTAAACACATCCAGCCCATCTGC  
CTCCAGGCCTCCACATTTGAGTTTGAGAACCGGACAGACTGCTGGGTGACTGGCTGGGGG  
TACATCAAAGAGGATGAGGCACTGCCATCTCCCCACACCCTCCAGGAAGTTCAGGTCGCC  
ATCATAAACAACCTCTATGTGCAACCACCTCTTCTCAAGTACAGTTTCCGCAAGGACATC  
TTTGGAGACATGGTTTGTGCTGGCAATGCCCAAGGCGGGAAGGATGCCTGCTTCGGTGAC  
TCAGGTGGACCCTTGGCCTGTAACAAGAATGGACTGTGGTATCAGATTGGAGTCGTGAGC  
TGGGGAGTGGGCTGTGGTCGGCCCAATCGGCCCGGTGTCTACACCAATATCAGCCACCAC  
TTTGAGTGGATCCAGAAGCTGATGGCCCAGAGTGGCATGTCCCAGCCAGACCCCTCCTGG  
CCACTACTCTTTTTCCCTCTTCTCTGGGCTCTCCCACTCCTGGGGCCGGTCTGAGCCTAC  
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TGGTAATAAACACATTCAGTTGATGCCTTGCAGGGCATTCTTCAAAAAAAAAAAAAAAAA AA

Identifier: AAN00001 DNA Sequence 942 BP  
Release Info: Derwent Geneseq Database Release No. 200124; Date released 26-NOV-01  
Database XReference: WPI; 1999-183825/16.;P-PSDB; AAW97116.  
Accession Number: AAX15336  
Patent Title: New eosinophils serine protease - useful for prevention and treatment of allergic, infectious, tumour, granuloma  
Patented by: (ONOH ) ONO PHARM CO LTD.  
Inventor:  
Description: Nucleic acid encoding a human eosinophil serine protease.  
Patent Number: JP11032768-A  
Patent Publication Date: 09-FEB-1999  
Modification Date: 04-MAY-1999 (first entry)  
Local Filing: 16-JUL-1997; 97JP-0191319  
Priority: 16-JUL-1997  
Abstract: The present sequence encodes a human eosinophil serine protease. The protease is useful in drug compositions for the treatment of tumour diseases, granulomatous diseases, collagen diseases and vascular inflammation.  
KeyWords: Human;eosinophil;serine protease;allergic disease;infectious disease;tumour;granulomatous disease;collagen c  
Organism Homo sapiens.  
Sequence Composition: Sequence 942 BP; 176 A; 283 C; 276 G; 207 T; 0 other;  
Sequence: >AAX15336 JP11032768-A PA (ONOH ) PR 16-JUL-1997 PF 16-JUL-1997 Nucleic acid encoding a human  
ATGGGCGCGCGCGGGGCGCTGCTGCTGGCGCTGCTGCTGGCTCGGGCTGGACTCAGGAAG  
CCGGAGTCGCAGGAGGCGGGCGCCGTTATCAGGACCATGCGGCCGACGGGTCATCACGTCCG  
CGCATCGTGGGTGGAGAGGACGCCGAACCTCGGGCGTTGGCCGTGGCAGGGGAGCCTGCGC  
CTGTGGGATTCCCACGTATGCGGAGTGAGCCTGCTCAGCCACCGCTGGGCACTCACGGCG  
GCGCACTGCTTTGAAACCTATAGTGACCTTAGTGATCCCTCCGGGTGGATGGTCCAGTTT  
GGCCAGCTGACTTCCATGCCATCCTTCTGGAGCCTGCAGGCCTACTACACCCGTTACTTC  
GTATCGAATATCTATCTGAGCCCTCGCTACCTGGGGAATTCACCCTATGACATTGCCTTG  
GTGAAGCTGTCTGCACCTGTACCTACACTAAACACATCCAGCCCATCTGCCTCCAGGCC  
TCCACATTTGAGTTTGAGAACCGGACAGACTGCTGGGTGACTGGCTGGGGGTACATCAAA  
GAGGATGAGGCACTGCCATCTCCCCACACCCTCCAGGAAGTTCAGGTCGCCATCATAAAC  
AACTCTATGTGCAACCACCTCTTCTCAAGTACAGTTTCCGCAAGGACATCTTTGGAGAC  
ATGGTTTGTGCTGGCAATGCCCAAGGCGGGAAGGATGCCTGCTTCGGTGACTCAGGTGGA  
CCCTTGGCCTGTAACAAGAATGGACTGTGGTATCAGATTGGAGTCGTGAGCTGGGGAGTG  
GGCTGTGGTTCGGCCAATCGGCCCGGTGTCTACACCAATATCAGCCACCACTTTGAGTGG  
ATCCAGAAGCTGATGGCCCAGAGTGGCATGTCCAGCCAGACCCCTCCTGGCCACTACTC TTTT

Identifier: AAW97116 Protein Sequence 314 AA  
Release Info: Derwent Geneseq Database Release No. 200124; Date released 26-NOV-01  
Database  
XReference: WPI; 1999-183825/16.;N-PSDB; AAX15336.  
Accession  
Number: AAW97116  
Patent Title: New eosinophils serine protease - useful for prevention and treatment of allergic, infectious, tumour, granulom  
Patented by: (ONOH ) ONO PHARM CO LTD.  
Inventor:  
Description: A human eosinophil serine protease.  
Patent  
Number: JP11032768-A  
Patent  
Publication Date: 09-FEB-1999  
Modification  
Date: 04-MAY-1999 (first entry)  
Local Filing: 16-JUL-1997; 97JP-0191319  
Priority: 16-JUL-1997  
Abstract: The present sequence represents a human eosinophil serine protease. The protease is useful in drug compositio  
tumour diseases, granulomatous diseases, collagen diseases and vascular inflammation.  
KeyWords: Human;eosinophil;serine protease;allergic disease;infectious disease;tumour;granulomatous disease;collagen c  
Organism Homo sapiens.  
Sequence  
Composition: Sequence 314 AA; 23 A; 15 R; 11 N; 12 D; 0 B; 10 C; 14 Q; 11 E; 0 Z; 30 G; 8 H; 13 I; 36 L; 9 K; 7 M; 13 F;  
Sequence: >AAW97116 JP11032768-A PA (ONOH ) PR 16-JUL-1997 PF 16-JUL-1997 A human eosinophil serine prot  
MGARGALLLALLLARAGLRKPESQEAAPLSGPCGRRVITSRIVGGEDAELGRWPWQGSLR  
LWDSHVCGVSLLSHRWALTAAHCFETYSDLSDPGWMVQFGQLTSMPSFWSLQAYYTRYF  
VSNIYLSPRYLGNSPYDIALVKLSAPVTYTKHIQPICLQASTFEFENRTDCWVTGWGYIK  
EDEALPSPHTLQEVQVAIINNSMCNHLFLKYSFRKDIFGDMVCAGNAQGGKDACFGDSSG  
PLACNKNGLWYQIGVVSWGVCGRPNRPGVYTNISHHFEWIQKLMAQSGMSQPDPSWPLL FFPLLW